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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/235,811	09/06/2002	Yoshikazu Banno	03500.011080.8	5030

5514 7590 09/08/2003

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
LORENGO, JERRY A	

ART UNIT	PAPER NUMBER
1734	

DATE MAILED: 09/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

03500.011080.8
FAD
12/8/03 - 1/8/04
9/15/03 mq

BEST AVAILABLE COPY

DETAILED ACTION

(1)

Election/Restrictions

Newly submitted claims 47 and 48 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 36-46, drawn to an apparatus for producing an electron-emitting device, classified in class 118, subclass 688.

II. Claims 47 and 48, drawn to a method for producing an electron-emitting device, classified in class 427, subclass 96.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such as the formation of ink-jet printed images on a substrate to form a decorative article.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter as shown by their different classification, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 47 and 48 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

(2)

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 36 and 45 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim1 of U.S. Patent No. 6,511,545 to Banno et al.. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 36 and 45 of the instant invention and claim 1 of U.S. Patent No. 6,511,545 to Banno et al. both disclose:

> An apparatus for producing an electron-emitting device, the device comprising a conductive film, the opposite ends of which are connected respectively to electrodes and which includes an electron emission region therein between the electrodes, said apparatus comprising:
>
> droplet supplying means for ejecting a droplet containing a metal element toward a substrate thereby supplying said droplet on said substrate, the ejected metal element forming the conductive film on the substrate;
>
> detection means for detecting a state of said supplied droplet; and
>
> control means for controlling an ejecting condition of said droplet supplying means on a basis of the state obtained via said detection means.

(3)

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 36-46 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 63-200041 to Ito et al.

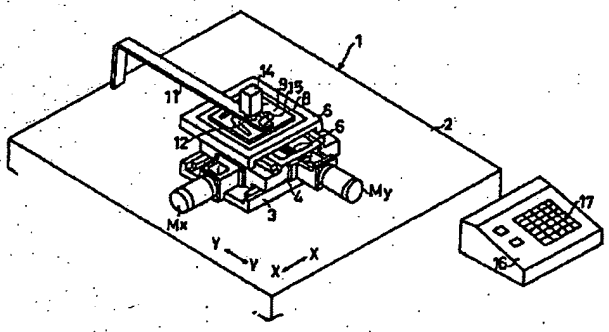
Regarding applicant claims 34 and 45, Ito et al. discloses an apparatus for the production of ink -jet printed IC devices comprising:

(1) A droplet supplying means 12 for ejecting a droplet 13 of circuit forming material on a IC substrate 9 (pages 4 and 5*);

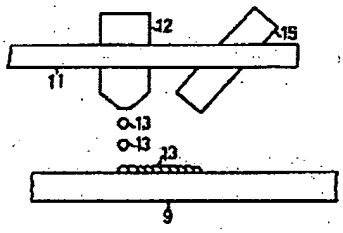
(2) A detection means (camera) 15 for detecting the state of the supplied droplet13 (page 5); and

(3) A control means (CPU) 19 for controlling the operation of the droplet supplying means 12 on the basis of the state of the supplied droplet 13 obtained by the detection means 15 (pages 7-9). The apparatus of Ito et al. is illustrated below:

第 1 図



第 8 図



Regarding applicant claims 37 and 39, Ito et al. discloses that apparatus employs a droplet arrival detection means (camera) 15 (page 5) and may also utilize a droplet detection means for the simultaneous detection of whether the droplets 13 are discharged from the droplet ejecting means 12 (pages 3 and 10);

Regarding applicant claim 38, Ito et al. discloses that the place where the existence of the droplet 13 is detected is not limited to the attainment of the position of the droplet 13 by an optical attainment system on the substrate 9 and may also comprise the use of an optical detector in the, i.e., a single, optical detecting system for detecting a falling droplet 13 (page 10).

Regarding applicant claim 40, Ito et al. discloses that the apparatus is capable of successively detecting the droplet arrival position P of each droplet 13 (pages 7-9).

* Note to Applicant: Text references in this office action refer to the English translation of JP-63-200041.

Regarding applicant claim 41, Ito et al. discloses that the apparatus utilized a positioning means (X-Y table base) 5 moved by X and Y motors which is controlled by control means (CPU) 19 based upon the state of the supplied droplet 13 obtained by the detection means 15 (Figure 1; pages 4, 5, 7 and 8).

Regarding applicant claims 42-44 and 46, Ito et al. discloses that the droplet supplying means 12 may comprise either a peizo-type ink-jet head or a thermal-type (bubble-jet) ink-jet head (page 5).

(4)

Response to Amendments and Arguments

The amendments and arguments filed June 23, 2003 are acknowledged. Newly added claims 47 and 48 have been withdrawn from further consideration as set forth in section (1), above. Newly added claim 45 has been rejected, along with applicant claim 36, under double patenting as set forth in section (2), above. Lastly, claims 45 and 46 have also been rejected as anticipated by Ito et al. in section (3), above.

Regarding the double patenting rejection of claim 36, the applicant argues that the amendments to claim 36 have obviated that rejection. The examiner respectfully submits, however, that the limitations added are drawn only to functional limitations which have no bearing on the overall structural limitations of the claim. As such, claim 36, along with newly added claim45, has been again rejected over claim 1 of U.S. Patent No. 6,511,545 to Banno et al. under the judicially created doctrine of obviousness-type double patenting.

Regarding the applicant's arguments against the Ito et al. reference, the applicant contends that droplet detecting means of Ito et al. does not function to detect a position in the substrate where the droplet is to be supplied, prior to the supplying of the droplet, and detecting a state of the droplet supplied on the substrate and moving the droplet supplying means according to the position detected by the detection means.

The examiner respectfully submits, however, that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus shows all of the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). As such, the examiner respectfully submits that the Ito et al. reference shows all of

the structural limitations of the claim (droplet supplying means; detection means; and control means) and is therefore anticipatory thereof.

(5)

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

(6)

Applicant is encouraged to **FAX After Final Amendments** (37 CFR 1.116) to expedite delivery to the Examiner. The Group 1734 Facsimile number is **(703) 872-9311**. A duplicate mailed copy of the facsimile transmission is **not required** and will only serve to delay the processing of your application.

If the applicant prefers to mail in After Final correspondence it is highly recommended that such be mailed to **BOX AF** which will also facilitate processing from the mailroom and within Group 1700.

(7)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (703) 306-9172. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7115 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

J.A. Lorengo
Primary Examiner
AU 1734
September 5, 2003

MAR 26 2003

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10/235,811	09/06/2002	Yoshikazu Banno	03500.011080.8	5030

5514 7590 03/18/2003

FITZPATRICK CELLA HARPER & SCINTO
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NEW YORK, NY 10112

EXAMINER
LORENGO, JERRY A

ART UNIT	PAPER NUMBER
1734	3

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

FILE NO. 03500.011080.8
ATTORNEY FAD
DUE DATE 6/18/03
DOCKETED 3/26/03 AW

Office Action Summary	Application No.	Applicant(s)	
	10/235,811	BANNO ET AL.	
	Examiner	Art Unit	
	Jerry A. Lorengo	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 September 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *36-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *36-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. *08/572,113* .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *1* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

(1)

Note to Applicant

The instant application has been filed as a Divisional of Application Serial No. 09/288,815. That application, however, does not contain any election/restriction requirement upon which a subsequent Divisional application could be based. The instant application, therefore, is being treated as a Continuation of 09/288,815.

(2)

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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control means for controlling an ejecting condition of said droplet supplying means on a basis of the state obtained via said detection means.

(3)

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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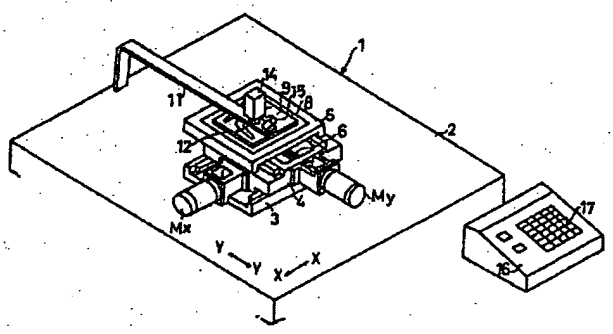
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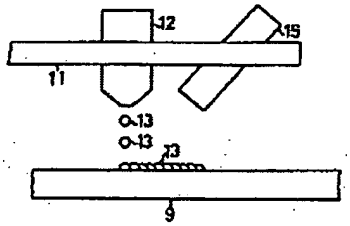
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第 1 図



第 8 図



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J.A. Lorengo
Primary Examiner
AU 1734
March 12, 2003